

## CLAIMS

### What is Claimed is:

1           1.       A method of providing a video program in response to a user demand,  
2 wherein the video program is repeatedly transmitted on one of a plurality of channels,  
3 each repeated transmission temporally separated from a previous transmission by a  
4 retransmission interval and being transmitted on a different channel than the previous  
5 transmission, the method comprising the steps of:  
6           selecting at least one of a plurality of video programs for VOD service;  
7           receiving and storing a first segment of the selected video program in a local  
8 storage device before accepting a user demand to view the selected video program,  
9 wherein a temporal length of the first segment is substantially equivalent to the  
10 retransmission interval; and  
11           after accepting the user demand to view the selected video program, retrieving the  
12 stored first segment for presentation to the user while receiving and storing subsequent  
13 segments of the video program from each of the plurality of channels transmitting a  
14 portion of the selected video program in parallel in the local storage device.

1           2.       The method of Claim 1, wherein the step of selecting at least one of the  
2 plurality of video programs for VOD service comprises the steps of:  
3           scanning a program guide having an entry for each of the video programs for a  
4 VOD service indicator; and  
5           identifying a video program associated with the VOD service indicator as the  
6 selected video program.

1           3.       The method of Claim 2, wherein the program guide is stored in the local  
2 storage device.

1           4.       The method of Claim 2, wherein the step of selecting at least one of a  
2 plurality of video programs for VOD service comprises the steps of:  
3           accepting a selection of at least one of the video programs for VOD service; and  
4           associating the VOD indicator with the entry of each video program selected for  
5 VOD service.

1           5.       The method of Claim 4, wherein the step of selecting at least one of the  
2 plurality of video programs for VOD is performed by the user and the method further  
3 comprises the step of presenting a program guide to the user.

1           6.       The method of Claim 2, further comprising the steps of:  
2           accepting a selection of a category of video programs for VOD service; and  
3           associating the VOD indicator with the entry of each video program that is a  
4 member of the selected category of video programs.

1           7.       The method of Claim 1, wherein the step of selecting at least one of the  
2 plurality of video programs for VOD service comprises the steps of:  
3           scanning a program guide having an entry for each of the video programs to  
4 identify at least one video program scheduled to be repeatedly transmitted on one of a  
5 plurality of channels, each repeated transmission temporally separated from a previous  
6 transmission by a retransmission interval and being transmitted on a different channel  
7 than the previous transmission; and  
8           selecting the identified video program as the selected video program.

1           8.       The method of Claim 7, wherein the step of scanning the program guide  
2 comprises the step of comparing video program information for each of the entries,  
3 wherein the video program information comprises a program title.

1           9.       The method of Claim 7, wherein the step of scanning the program guide  
2 comprises the step of comparing video program information for each of the entries,  
3 wherein the video program information comprises a unique program identifier.

1           10.     The method of Claim 1, wherein the step of storing a first segment of a  
2     selected video program in a local storage device comprises the step of receiving data  
3     representing the first segment of the video program from a program source in a receiver  
4     communicatively coupled to the local storage device at a time scheduled by the program  
5     source.

1           11.     The method of Claim 1, further comprising the step of splicing the  
2     subsequent segments to the first segment for presentation to the user in response to the  
3     user demand.

1           12.     The method of Claim 11, wherein the video segments each comprise a  
2     plurality of video sub-segments each sub-segment associated with a time code, and the  
3     step of splicing the subsequent segments to the first segment for presentation to the user  
4     comprises the step of sorting the sub-segments in accordance with the time codes.

1           13.     The method of Claim 12, wherein the time code is an SMPTE time code.

1           14.     The method of Claim 12, wherein the time code is a program time stamp.

1           15.     The method of Claim 11, wherein the video segments each comprise a  
2     plurality of video sub-segments, each sub-segment associated with a time code and a  
3     channel identifier, and the step of splicing the subsequent segments to the first segment  
4     for presentation to the user comprises the steps of:  
5         assembling the sub-segments by the associated channel identifier; and  
6         sorting the assembled sub-segments in accordance with the time codes.

1           16.    The method of Claim 1, wherein each of the subsequent segments is  
2 encrypted so as to be decryptable with a key before being received and stored in the local  
3 storage device, and the method further comprises the steps of:  
4           in response to the user demand and while retrieving the stored first segment for  
5 presentation to the user, transmitting a message separately identifying each of the  
6 subsequent segments of the selected video program and the user to a program source; and  
7           receiving the key.

1           17.    The method of Claim 16, further comprising the step of decrypting the  
2 encrypted subsequent segments with the keys.

1           18.    The method of Claim 1, wherein each of the segments is encrypted so as to  
2 be decryptable by a different key before being received and stored in the local storage  
3 device, and the method further comprises the steps of :  
4           in response to the user demand, transmitting a message separately identifying each  
5 of the segments of the selected video program and the user to a program source; and  
6           receiving a key for each of the segments.

1           19.    The method of Claim 18, further comprising the step of decrypting the  
2 encrypted segments with each of the plurality of keys.

1           20.    A method of storing a video program in response to a user demand,  
2 wherein the video program is repeatedly transmitted on one of a plurality of channels,  
3 each repeated transmission separated in time from a preceding transmission of the video  
4 program by a retransmission interval and being transmitted on a different channel than the  
5 previous transmission, the method comprising the steps of:  
6           selecting at least one of a plurality of video programs; and  
7           receiving a plurality of time segments of the selected video program in parallel,  
8 wherein each of the time segments is received on a different one of the channels.

1           21.     The method of Claim 20, wherein the time segments of the selected video  
2 program are staggered in time by the transmission interval.

1           22.     The method of Claim 20, further comprising the step of:  
2           selecting a second video program for real time reception; and  
3           receiving the selected second video program in real time while receiving the  
4 plurality of time segments of the selected video program in parallel.

1           23.     The method of Claim 20, wherein the step of receiving a plurality of time  
2 segments of the selected video program in parallel is performed during a standby interval.

1           24.     An apparatus for providing a video program in response to a user demand  
2 wherein the video program is repeatedly transmitted on one of a plurality of channels,  
3 each repeated transmission temporally separated from a previous transmission by a  
4 retransmission interval and being transmitted on a different channel than the previous  
5 transmission, the apparatus comprising:  
6           means for selecting at least one of a plurality of video programs for VOD service;  
7           means for receiving and storing a first segment of the selected video program in a  
8 local storage device before accepting a user demand to view the selected video program,  
9 wherein a temporal length of the first segment is substantially equivalent to the  
10 retransmission interval; and  
11          means for retrieving the stored first segment for presentation to the user while  
12 receiving and storing subsequent segments of the video program from each of the  
13 plurality of channels transmitting a portion of the selected video program in parallel after  
14 accepting the user demand to view the selected video program.

1           25.     The apparatus of Claim 24, wherein the means for selecting at least one of  
2 the plurality of video programs for VOD service comprises:

3                 means for scanning a program guide stored in the local storage device having an  
4 entry for each of the video programs for a VOD service indicator; and

5                 means for identifying the video program associated with the VOD service  
6 indicator as the selected video program.

1           26.     The apparatus of Claim 25, wherein the program guide is stored in the  
2 local storage device.

1           27.     The apparatus of Claim 25, wherein the means for selecting at least one of  
2 a plurality of video programs for VOD service comprises:

3                 means for accepting a selection of at least one of the video programs for VOD  
4 service; and

5                 means for associating the VOD indicator with the entry of each video program  
6 selected for VOD service.

1           28.     The apparatus of Claim 26, wherein the plurality of video programs are  
2 selected for VOD service by a VOD service provider.

1           29.     The apparatus of Claim 27, wherein the at least one of the plurality of  
2 video programs for VOD is selected by the user and the apparatus further comprises  
3 means for presenting a program guide to the user.

1           30.     The apparatus of Claim 25, further comprising:

2                 means for accepting a selection of a category of video programs for VOD service;  
3 and

4                 means for associating the VOD indicator with the entry of each video program  
5 that is a member of the selected category of video programs.

1           31.     The apparatus of Claim 24, wherein the means for selecting at least one of  
2 the plurality of video programs for VOD service comprises:

3                 means for scanning a program guide having an entry for each of the video  
4 programs to identify at least one video program scheduled to be repeatedly transmitted on  
5 one of a plurality of channels, each repeated transmission temporally separated from a  
6 previous transmission by a retransmission interval and being transmitted on a different  
7 channel than the previous transmission; and

8                 means for selecting the identified video program as the selected video program.

1           32.     The apparatus of Claim 31, wherein the means for scanning the program  
2 guide comprises means for comparing video program information for each of the entries,  
3 wherein the video program information comprises a program title.

1           33.     The apparatus of Claim 31, wherein the means for scanning the program  
2 guide comprises means for comparing video program information for each of the entries,  
3 wherein the video program information comprises a unique program identifier

1           34.     The apparatus of Claim 24, wherein the means for storing a first segment  
2 of a selected video program in a local storage device comprises means for receiving data  
3 representing the first segment of the video program from a program source in a receiver  
4 communicatively coupled to the local storage device at a time scheduled by the program  
5 source.

1           35.     The apparatus of Claim 24, further comprising means for splicing the  
2 subsequent segments to the first segment for presentation to the user in response to the  
3 user demand.

1           36.     The apparatus of Claim 35, wherein the video segments each comprise a  
2 plurality of video sub-segments each sub-segment associated with a time code, and the  
3 means for splicing the subsequent segments to the first segment for presentation to the  
4 user comprises means for sorting the sub-segments in accordance with the time codes.

1           37.     The apparatus of Claim 36, wherein the time code is the SMPTE time  
2     code.

1           38.     The apparatus of Claim 36, wherein the time code is a program time  
2     stamp.

1           39.     The apparatus of Claim 35, wherein the video segments each comprise a  
2     plurality of video sub-segments, each sub-segment associated with a time code and a  
3     channel identifier, and the means for splicing the subsequent segments to the first  
4     segment for presentation to the user comprises:  
5                 means for assembling the sub-segments by the associated channel identifier; and  
6                 means for sorting the assembled sub-segments in accordance with the time codes.

1           40.     The apparatus of Claim 24, wherein each of the subsequent segments is  
2     encrypted so as to be decryptable with a key before being received and stored in the local  
3     storage device, and the apparatus further comprises:  
4                 means for transmitting a message separately identifying each of the subsequent  
5     segments of the selected video program and the user to a program source while retrieving  
6     the stored first segment for presentation to the user;  
7                 means for receiving the key; and  
8                 wherein the message separately identifying each of the subsequent segments of  
9     the selected video program and the user to a program source is transmitted in response to  
10     a user demand.

1           41.     The apparatus of Claim 40, further comprising means for decrypting the  
2     encrypted subsequent segments with the key.



1           42.     The apparatus of Claim 24, wherein each of the segments is encrypted so  
2     as to be decryptable by a different key before being received and stored in the local  
3     storage device, and the apparatus further comprises:

4                 means for transmitting a message separately identifying each of the segments of  
5     the selected video program and the user to a program source in response to the user  
6     demand; and

7                 means for receiving a key for each of the segments.

1           43.     The apparatus of Claim 42, further comprising means for decrypting the  
2     encrypted segments with each of the plurality of keys.

1           44.     An apparatus for storing a video program in response to a user demand,  
2     wherein the video program is repeatedly transmitted on one of a plurality of channels,  
3     each repeated transmission separated in time from a preceding transmission of the video  
4     program by a retransmission interval and being transmitted on a different channel than the  
5     previous transmission, the method comprising:

6                 means for selecting at least one of a plurality of video programs; and

7                 means for receiving a plurality of time segments of the selected video program in  
8     parallel, wherein each of the time segments is received on a different one of the channels.

1           45.     The apparatus of Claim 44, wherein the time segments of the selected  
2     video program are staggered in time by the transmission interval.

1           46.     The apparatus of Claim 44, further comprising:

2                 means for selecting a second video program for real time reception; and

3                 means for receiving the selected second video program in real time while  
4     receiving the plurality of time segments of the selected video program in parallel.

1           47.     The apparatus of Claim 44, wherein the plurality of time segments of the  
2     selected video program in parallel is performed during a standby interval.

1           48.     An apparatus for providing a video program in response to a user demand,  
2     wherein the video program is repeatedly transmitted on one of a plurality of channels,  
3     each repeated transmission temporally separated from a previous transmission by a  
4     retransmission interval and being transmitted on a different channel than the previous  
5     transmission, the apparatus comprising:

6           an input device for accepting a selection of at least one of a plurality of video  
7     programs for VOD service;

8           a tuner for receiving multiple segments of the selected video program in parallel,  
9     wherein each segment is received on one of the plurality of channels; and

10          a storage device, for pre-storing a first segment of the selected video program, and  
11     for storing subsequent segments of the selected video program in parallel while retrieving  
12     the pre-stored first segment of the selected video program.

1           49.     The apparatus of Claim 48, further comprising:

2           a memory for storing a program guide having an entry for each of the video  
3     programs; and

4           a processor, coupled to the input device and the tuner, and the memory, for  
5     scanning the program guide for a VOD service indicator, and for identifying the video  
6     program associated with the VOD service indicator as the selected video program.

1           50.     An apparatus for providing a video program transmitted in segments on a  
2     plurality of channels in response to a user demand, comprising:

3           an input device for accepting a selection of at least one of a plurality of video  
4     programs for VOD service;

5           a tuner for receiving time segments of the selected video program in parallel,  
6     wherein each segment is received on one of the plurality of channels; and

7           a storage device, for storing the segments of the selected video program in parallel  
8     wherein each of the time segments is received on a different one of the channels.

1           51.     The apparatus of Claim 50, wherein the time segments of the selected  
2     video program are staggered in time by the transmission interval.